Panasonic®

SV-3700

Professional Digital Audio Tape Deck

Introducing the SV-3700, the Panasonic Digital Audio Tape deck designed specifically for professional applications. The SV-3700 incorporates significant advances in the areas of analog-to-digital converters, digital-to-analog converters, transport accuracy and reliability, plus control and interface technology. In the SV-3700, one bit A-D converters bring dramatically improved performance and linearity when compared to conventional successive approximation A-D converters. These high-performance one-bit ADCs reduce both signal and zero cross distortion producing cleaner, clearer audio at low as well as high levels.

Subjectively, this translates to accuracy in the spectral balance, ambience, and "space" around instruments that form the most important part of natural musical and "correct" sound.

Important features

- Shuttle wheel
- AES/EBU input/output
- High performance A-D one-bit converters
- High resolution 4-DAC system
- 4-digit error rate display
- Instrumentation quality input/output interface

Panasonic AV
Professional Audio Systems

Inside the SV-3700

The transport of the SV-3700 is built on a massive die-cast chassis that ensures stability and accurate dimensional tolerance. Built almost entirely by robots for consistency and reliability, this proprietary transport and head assembly provides superior performance compared to traditional hand assembled bent metal construction transports.

Considerable investments were made to improve the price/performance/reliability of the SV-3700 over that of the highly successful SV-3500. Development of VLSICs specifically for the Panasonic DAT reduced the number of components and PC boards to a minimum. One main PC board carries all of the functions that previously required four. The consequent reduction in components, manufacturing stages, and adjustments markedly improves performance and reliability.

The conversion of digital data to audio information is accomplished by high resolution DAC systems. Four of these high-precision DACs, two per channel, ensure optimum replay quality by effectively removing zero cross distortion and enhancing linearity.

Real World Engineering

The SV-3700 has instrumentation quality input and output circuitry designed with an understanding of "real world" cabling, grounding, and RF interference problems and how these degrade audio quality. One of the traditionally weak areas in pro audio has been interface technology. All too often basically good equipment is marred by bad design of input and output circuits.

Unstable output stages introduce severe coloration and inputs that hum, buzz and perform as CB and RF tuners, and cause mushy bass or colored highs, through grounding and capacitance crosstalk.

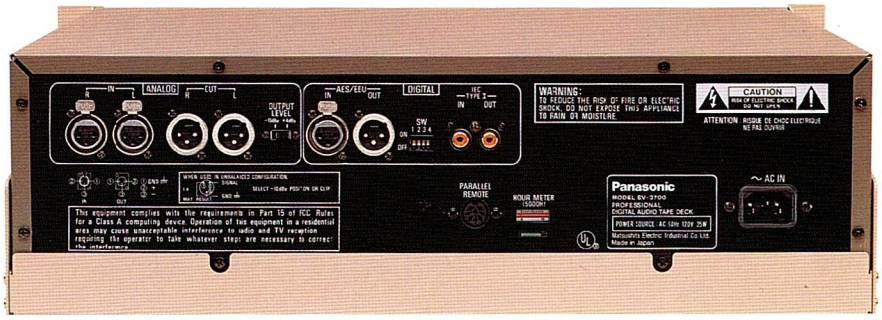
Utilizing experience gained in the development of top quality studio and touring sound equipment, our engineers have designed input and output circuitry that can interface with the widest variety of devices in all applications while maintaining the utmost quality and integrity of the signal.

Industry Standard Digital I/O

AES/EBU Professional Format and IEC 958 Consumer Format Digital Inputs and Outputs provide direct interfacing with compact disc players, digital audio workstations, and other components in a recording studio or production facility.

A comprehensive display includes program numbers, Absolute Time, Program Time, Remaining Time and Table of Contents. TOC displays Total Recorded Time and Total PNO count for commercial prerecorded DAT tapes.

Sampling rates are selectable in record mode from the analog inputs at 44.1kHz and 48kHz. Recording from the digital inputs, the SV-3700 automatically clocks to incoming frequencies of 32kHz, 44.1kHz or 48kHz.



Controllability

The infrared Wireless Remote Controller enables remote operation of all front panel functions. The Shuttle Wheel has two variable speed ranges, allowing program material to be auditioned at slow or high speed in forward and reverse.

A high speed transport with up to 400 times Fast Forward/Rewind and Search speeds ensures access to any point on a two-hour DAT tape in approximately 27 seconds. A new straight line DAT feed system simplifies loading for low maintenance. The SV-3700 will display the Serial Copy Management System (SCMS) status during recording and playback. Rear panel DIP switches can be used to preset SCMS ID 6 status during a recording via the AES/EBU Professional Digital Inputs.

Error correction rates can be displayed during replay by simultaneously pressing the front panel Counter Mode, Reset and Pause buttons, then pressing the Mode switch a second time. The time display window now shows the combined error rate for the A and B heads. Pressing Counter Mode again displays the error rate for the A head alone. Normal mode is restored by pressing the Reset again.

Ramped Record mute and unmute with three second fade in and five second fade out provides automatic level changes at the start and end of a recording.

SV-3700 Specifications

Signal Format

Recording System	Rotary head type DAT
Sampling frequency	
Recording	48kHz/44.1kHz (analog/digital inputs) 32kHz (digital input only)
Playback	48kHz/44.1kHz/32kHz (selected automatically)
Modulation Method	8-10 Conversion
Encoding/Decoding	16-bit Linear PCM; two channels
Error Correction	Double encode Reed-Solomon Code

Transport

Record/Playback Heads	Amorphous Ferrite-composite type
Cylinder Diameter	30 mm
Cylinder Rotation Speed	2,000 rpm
Tape Speed	8.15 mm/s and 12.225 mm/s (selected automatically)
Track Pitch	13.6 μm
FF/Rewind Time	Approx. 27 seconds for a 2 hour DAT tape
FF/Rewind Speed	Up to 400 times normal playback speed
Search Speed	Up to 250 times normal playback speed
Shuttle Speed	Between 0.5-15 times normal playback speed

Audio

Number of Channels	Two (stereo)
Frequency Response	At 48 kHz Sampling Freq. 10 Hz to 22 kHz (± 0.5 dB) At 44.1 kHz Sampling Freq. 10 Hz to 20 kHz (± 0.5 dB) At 32 kHz Sampling Freq. 10 Hz to 15 kHz (± 0.5 dB)
Signal to Noise Ratio	Greater than 92 dB, DIN weighted (22.4 Hz to 22.4 kHz bandpass)
Total Harmonic Distortion	Less than 0.05% (1 kHz; +4 dBu) Less than 0.007% (1 kHz; +22 dBu)
Cross Talk	Less than 80 dB (1 kHz)
Headroom	18 dB
Wow and Flutter	Unmeasurable

Analog Input/Output Characteristics

Input Connector	XLR-3 type
Input Impedance	10 k ohm balanced
Nominal Input Level	+4 dBu (-18 dB record level)
Maximum Input Sensitivity	-14 dBu (-18 dB record level)
Maximum Input Level	+26 dBu
Output Connector	XLR-3 type
Actual Output Impedance	75 Ohms balanced
Maximum Load Impedance	600 Ohms
Nominal Output Level	+4 dBu/-10 dBu (switch selectable)
Maximum Output Level	+22 dBu
Headphone Connector	TRS Phone Jack
Maximum Headphone Output	30 mW/32 Ohms

AES/EBU Digital Input/Output Characteristics

Input Connector	XLR-3 type
Input Impedance	100 Ohms balanced
Nominal Input Level	3-10 Volts peak to peak
Output Connector	XLR-3 type
Actual Output Impedance	20 Ohms balanced
Maximum Load Impedance	100 Ohms
Output Level	5 Volts peak to peak

IEC 958/TYPE-2 "S/PDIF" Digital Input/Output

Input Connector	RCA Phono type (coaxial)
Input Impedance	75 Ohms
Nominal Input Level	200-500 millivolts peak to peak
Output Connector	RCA Phono type (coaxial)
Actual Output Impedance	75 Ohms
Maximum Load Impedance	75 Ohms
Output Level	500 millivolts peak to peak

Wired Remote Control Input

Input Connector	8 Pin DIN
Wiring Type	Parallel, connect to ground
Functions Controlled	Play, Stop, Rec, Pause, FF, Rew, F-skip, R-skip

Infrared Remote Control Input

Functions Controlled	All Deck Functions and Programing (except Shuttle Wheel)

General

Power Supply	120 Volts AC, 60 Hz
Power Consumption	35 Watts
Dimensions (WxHxD)	16 7/8 x 4 3/4 x 12 3/8 inches (430 x 122 x 315 mm)
Weight	13.5 Pounds (6.14kg)
Included Accessories	AC Power Cord Infrared Remote Control Rack Mount Kit Cleaning Tape (RT-RCLP)
Optional Accessories	Wired Remote Control (SSE44)

Specifications subject to change without notice.© 1990

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